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ABSTRACT

The paper describes the planning, preparation and conduct of an academic treatment program for 120 adjudicated delinquents identified as learning disabled (LD). The remediation program, conducted in three locales, each representing a different demographic focus, was based on an academic treatment model incorporating elements of process training and task analysis. Three major objectives were addressed: to improve scholastic achievment, reduce the delinquent activities, and improve school attitudes. Excerpts and summaries of final reports from the sites (Baltimore, Indianapolis, and Phoenix) are presented, along with a summary of problems (administrative and program-related) from the national project offices. Among conclusions noted are that the data indicate definitive evidence that LD youth engage in significantly more delinquent behavior than non-LD youth, and that the remediation program improved reading and arithmetic achievement test performance. Recommendations are offered regarding policy and programs. (CL)

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THE ACLD-R&D PROJECT: A STUDY INVESTIGATING THE LINK BETWEEN LEARNING DISABILITIES AND JUVENILE DELINQUENCY EXECUTIVE SUMMARY

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ACLD-R&D PROJECT
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ACLD-R&D PROJECT:
A STUDY INVESTIGATING THE LINK BETWEEN
LEARNING DISABILITIES AND JUVENILE DELINQUENCY

EXECUTIVE SUMMARY OF THE DEVELOPMENT PROGRAM

This summary describes the planning, preparation and conduct of an academic treatment program for adjudicated delinquents identified as learning disabled. It was designed to assist in the development of informed policy and programs with respect to learning disabilities and juvenile delinquency.

HISTORICAL OVERVIEW

During the past several years, increasing attention and concern have been paid to the possibility of an empirical relationship between specific learning disabilities (LD) and juvenile delinquency (JD). In response to this interest and concern, the National Institute for Juvenile Justice and Delinquency Prevention (NIJJDP), Office of Juvenile Justice and Delinquency Prevention (OJJDP), commissioned a study by the American Institutes for Research (AIR) that summarized the available data and made policy recommendations.

The AIR report[1] concluded that while the existing literature clearly indicated the learning problems of delinquents warranted further investigation, it would be premature for OJJDP to fund major service delivery initiatives as the evidence on a link between LD and JD was inconclusive at best. Nevertheless, the topic was deemed worthy of further, more systematic exploration. The report recommended that carefully controlled research be conducted to determine the incidence of LD among a few basic populations, including the juvenile offender and the non-delinquent. The report also recommended the conduct of a development project to assess the effects of diagnosing and treating LD among juvenile delinquents.

In light of these recommendations, NIJJDP funded an LD/JD Project in October 1976. The purpose of the program was to obtain reliable data that would assist in the development of

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[1] Murray, C. A., The Link Between Learning Disabilities and Juvenile Delinquency: Current Theory and Knowledge, U.S. Government Printing Office, Washington, D. C., 1976.

informed policy and programs with respect to learning disabilities and juvenile delinquency. It consisted of three major components: (1) a study of the prevalence of LD among samples of officially non-delinquent adolescents and juvenile offenders (as defined by records of adjudication) in several parts of the country; (2) a research and development effort aimed at the remediation of groups of delinquents with learning disabilities, located at the same sites as the prevalence study; and (3) formative and summative evaluations of the LD/JD remediation program. Thus, there were five major objectives set to be achieved through the project's three components. These objectives were as follows:

1. The determination of the prevalence of LD in groups of adjudicated delinquent and officially non-delinquent 12-to-15-year old boys;

2. an exploration of some of the definitional issues concerning learning disabilities;

3. the conduct of an instructional (remediation) program for selected groups of 12-to-17-year old boys and girls who have been adjudicated delinquent and classified as learning disabled;

4. an evaluation of the effectiveness of the remediation program with respect to resulting changes in the participants' academic achievement and delinquent behavior; and

5. the follow-up of youths in the officially non-delinquent public school sample, to determine what changes in delinquent behavior have occurred, and the relationship of these changes to LD.

Two organizations were funded by grants from the NIJJDP to conduct the project. The Association for Children with Learning Disabilities (ACLD) assumed the responsibility for the remediation program (development component) targeted at the remediation of LD offenders in the metropolitan areas of Baltimore, Maryland; Indianapolis, Indiana; Phoenix, Arizona; and at the Arizona Youth Center in Tucson, Arizona. The National Center for State Courts (NCSC)[2] was awarded a grant to conduct both the prevalence study and the evaluation of the LD/JD remediation

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[2]The first phase of the research program was conducted at Creighton University and ended on 8/31/78. The two-year continuation of the research and evaluation components was conducted by the National Center for State Courts.

program. The NCSC contracted with the Educational Testing Service (ETS) to administer psycho-educational diagnostic assessments of the students. (See Table I).

The first tasks to be initiated and completed were those involving planning and preparation. In the latter part of 1976 and early 1977, the NCSC evaluators and the ACLD project representatives met numerous times with a national advisory group of researchers and practitioners from the areas of learning disabilities and juvenile delinquency. Also, ACLD and NCSC staff met with local advisory groups in the three target cities.

Discussion at these meetings focused upon a wide range of issues. Researchers were concerned about the difficult definitional issues, the research design and the type of educational model selected. Practitioners were concerned with the restrictions of the model, due to research purposes.

At any rate, at these early meetings, operational definitions of LD[3] and JD[4] were established, a battery of psycho-educational tests was identified and an academic remediation program was formulated.

Agreement from key agencies (in educational and juvenile justice systems) to cooperate was gained. Following this accomplishment, the most time-consuming task of all during this stage was that of obtaining written informed consent[5] from the parents of the juveniles. The basic research and evaluation design as exhibited in Table II was adopted.

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[3]Barrows, T. S.; Campbell, P. B.; Slaughter, B. A.; Trainor, M. L., Psycho-Educational Diagnostic Services for Learning Disabled Youth, Educational Testing Service, Princeton, New Jersey, 1977.

[4]Greguras, F. M.; Broder, P. K.; Zimmerman, J., Establishing an Operational Definition of Juvenile Delinquency, Institute for Business, Law and Social Research, Creighton University, Omaha, Nebraska, 1978.

[5]Greguras, F. M.; Broder, P. K.; Zimmerman, J., The Impact of Legal Contracts on Human Subjects Protection: A Preliminary Case Study, Creighton University, Omaha, Nebraska, 1979.

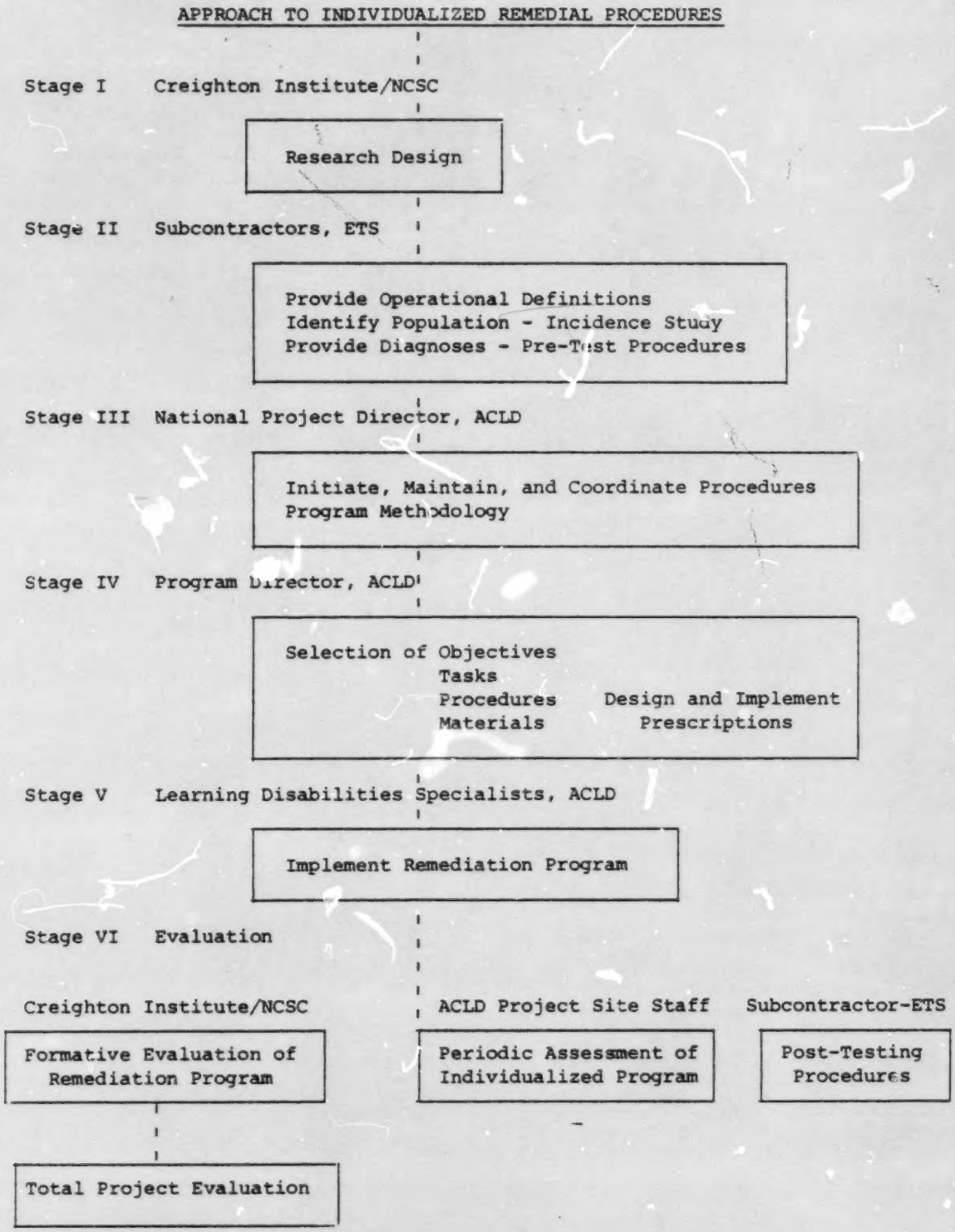
APPROACH TO INDIVIDUALIZED REMEDIAL PROCEDURES
Stage I Creighton Institute/NCSC
Research Design
Stage II Subcontractors, ETS
Provide Operational Definitions
Identify Population - Incidence Study
Provide Diagnoses - Pre-Test Procedures
Stage III National Project Director, ACLD
Initiate, Maintain, and Coordinate Procedures
Program Methodology
Stage IV Program Director, ACLD
Selection of Objectives
Tasks
Procedures
Materials
Design and Implement
Prescriptions
Stage V Learning Disabilities Specialists, ACLD
Implement Remediation Program
Stage VI Evaluation
Creighton Institute/NCSC
ACLD Project Site Staff
Subcontractor-ETS
Formative Evaluation of
Remediation Program
Periodic Assessment of
Individualized Program
Post-Testing
Procedures
Total Project Evaluation

TABLE I

Schematic Representation of Study Design

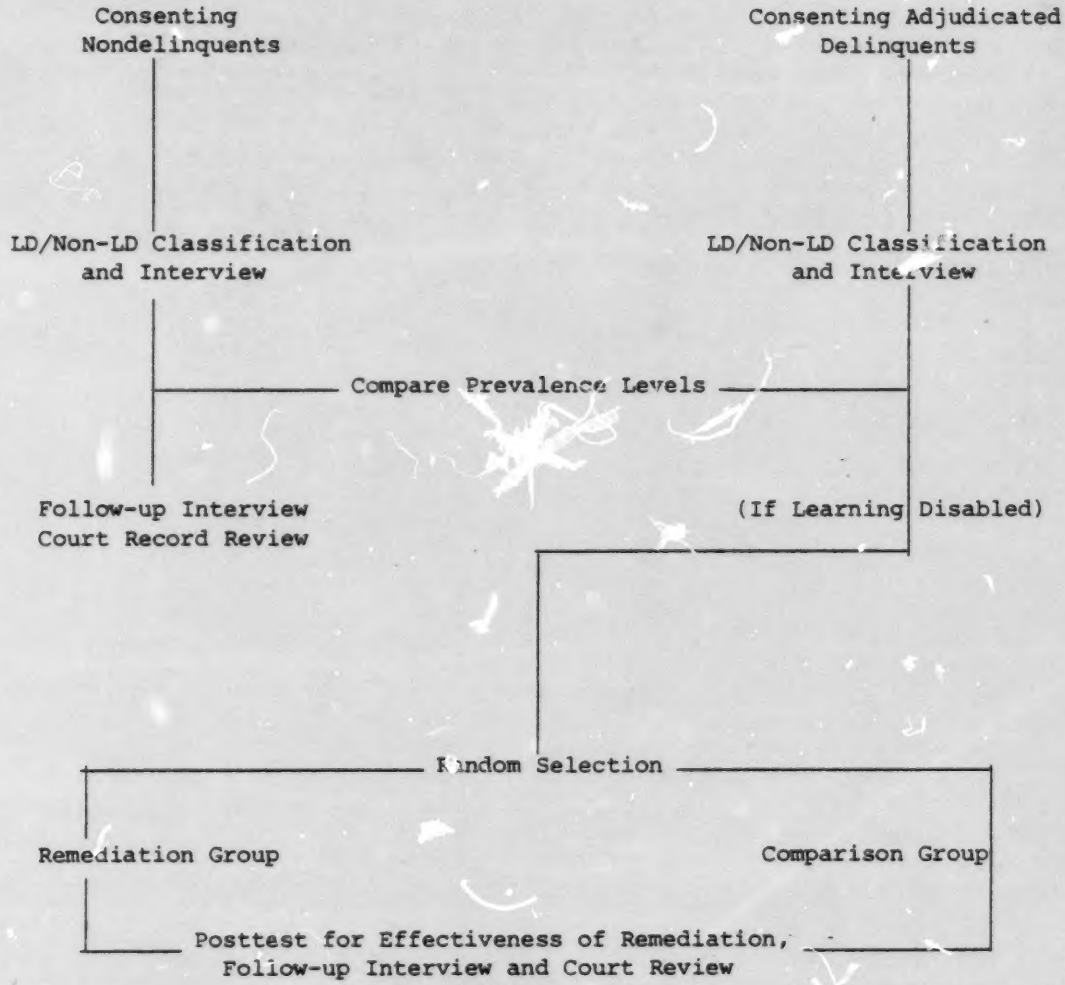

TABLE II

There was a review of educational records of 12-15-year old male juveniles[6] for whom informed consent had been received.

The process implemented by the ETS diagnostic assessors was based on the following:

> "At a conceptual level, LD is considered to be evidenced by a significant discrepancy between a child's expected achievement (based upon intelligence scores) and his or her actual achievement. Additionally, the discrepancy must not be attributable primarily to mental retardation, physical handicap, emotional disturbance, or environment disadvantage. The discrepancy is presumed to result from interference in the processes of receiving information, using it in cognition, or communicating the cognitive result.
>
> "Two major procedures were used to operationalize this concept. First, a review of educational records was done to screen out children who obviously were not learning disabled. Second, the children who could not be screened out were given a battery of standardized tests.
>
> "In the review of each child's school records, trained reviewers searched for any evidence of discrepancies in test scores or school grades, any clinical or anecdotal observations suggesting LD, and evidence of factors that would rule out LD as a primary classification (e.g., mental retardation, emotional disturbance, etc.). The interviewers were trained to err on the side of caution; if there were insufficient records or doubt about the proper judgment, the child was to be referred for complete testing. Children for whom sufficient data were available and who showed no recorded indications suggesting LD were classified as not learning disabled and referred only for interview.
>
> "Those children who were not classified as non-learning disabled on the basis of the records review were given a three-and-one-half hour battery of tests. The main testing instruments used were a children's test of intelligence (Wechsler Intelligence Scale for Children - Revised), tests of reading and mathematics achievement (the Woodcock Reading Mastery Test and the KeyMath Diagnostic Arithmetic Test), and a test of perceptual-motor ability (the Bender-Gestalt).

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[6] Study criteria set age limits for the youths to be included and specified that the subjects be primarily English-speaking and no evidence of mental retardation, severe emotional disturbance, or physical handicap as primary handicapping conditions.

"Based upon the test scores (and including ratings of observations of the child's behaviors during the testing session), each child was then classified as learning disabled or not. The classification decision was made by a computerized algorithm to ensure a consistent application of the decision rules. Briefly, a child was classified learning disabled when the protocols revealed three independent discrepancies among the following: a two-year or greater discrepancy among three WISC-R factor scores, (Witkin, 1974), between the WISC-R scores and achievement scores, or between the achievement scores; a Bender-Gestalt score of three or more (Koppitz (1963) scoring); two or more ratings of pronounced difficulties on the WISC-R observations; and three or more ratings of pronounced characteristics in the behavioral observations. Finally, children whose achievement test scores were at or above age-appropriate grade levels and those having a full-scale IQ more than two standard deviations below the mean were classified as non-learning disabled, rather than learning disabled." (Keilitz, I.; Saks, M. J.; Broder, P. K., The Evaluation of the Learning Disabilities/Juvenile Delinquency Remediation Program; Evaluation Design and Interim Results, pp. 55-56, National Center for State Courts, Williamsburg, Virginia 1979).

In addition, an interview was administered from juveniles whose records were reveiwed, as well as from those who were tested. The interview included questions about personal characteristics, family background, attitudes toward school, and self-reported delinquent activity.

Of the adjudicated delinquent youths who were classified as learning disabled, half were selected at random, by the evaluators, for inclusion in the remediation program, the remainder were assigned to a control group. Pre and post data were available for 120 members of the remediation group and 110 of the control group. The ethnicity break-down was 45% white, 38% black and 17% other minorities.[7]

A. ACLD-R&D REMEDIATION PROGRAM

Design/Description

The remediation program was conducted in three locales, each representing a different demographic focus. Baltimore represented an urban, high density eastern black community;

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[7] Dunivant, N., The Relationship Between Learning Disabilities and Juvenile Delinquency, Brief Summary of Research Findings, (p. 3), National Center for State Courts, Williamsburg, Virginia, 1982.

Indianapolis, a mid-western area, rural/semi-rural community with an appalachian and minority population; and Phoenix, representing a southwestern geographical area and a multi-ethnic population.

Each site had a program team to implement and conduct the remediation program. The teams consisted of a Program Director, Learning Disability Specialists and Aides. The program staff were certified teachers of Special Education in the states where they resided. The Program Directors held Masters or Doctorates in Special Education; they directed the program locally. Nationally, the Project Director was responsible for administering the overall grant program.

The program began in September 1977, and ran through July 1979, with the goal of providing at least the equivalent of one hour for each school day of a school year (i.e., 9 months) of remediation to each juvenile in the remediation sample population. The program was based on an academic treatment model in contrast to other models such as the behavioral-theoretical or medical. Remedial methods focused on school subjects and were written to ameliorate or compensate for students' deficiencies in the basic academic skill areas.

There were three major program objectives. These were to improve scholastic achievement, reduce the juveniles' delinquent activities and improve school attitudes. The program evaluation[8] was designed to examine the data collected to determine if the remediation program achieved these objectives.

Program strategies were established. The strategies were designed as a vehicle to facilitate conducting a successful program for a group of juveniles whose school records indicated that historically they had experienced school failure in the basic academic skills. The strategies were: 1) work on a level that increases proficiency in the functional areas; 2) use each juvenile's preferred modality; and 3) employ techniques for learning how to learn.

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[8] Dunivant, N.; Saks, M. J.; Broder, P. K., An Evaluation of the Effectiveness of the ACLD Remediation Program in Improving the Educational Achievement of Learning-Disabled Juvenile Delinquents.

Dunivant, N.; Saks, M. J.; Broder, P. K., Preventing Delinquency Among Learning-Disabled Juvenile Delinquents: Evaluation of the ACLD Academic Remediation Program.

The sample population at each site received remediation whenever and wherever it could be arranged - preferably during the time the juvenile was in an educational setting. Remediation sessions took place in school facilities, libraries, correctional facilities, detention centers, city jails, parks, place of youth's employment, project site offices, and at times at the youth's home. The LD Specialists functioned as itinerant teachers. They traveled from location to location in order to conduct remediation with their assigned students. The caseload per LD Specialist averaged from 6 to 12 students with 1 to 3 hours' remediation per week with each student.

Goals and objectives were written to delineate the type of remediation that would be most appropriate for each youth. The following sequence of events became standard procedure once a juvenile was assigned to a remediation group:

1. Review of student's diagnostic evaluation from ETS including recommendations. Review by site Program Director and full staff.

2. Caseload assignments by site Program Director to LD Specialists.

3. Locate and initial contact with student by LD Specialists.

4. Administration of additional formal/informal testing, i.e., Written Language Sample, Slingerland, Malcomesius, etc., by LD Specialists.

5. Remedial Prescription written using all diagnostic evaluation results.

6. Student and Program staffing - remediation schedule and location.

7. Writing lesson plans and identification of resource materials.

8. On-going remedial instruction.

9. Weekly staffing - Program Director with staff.

10. On-going assessment and monitoring of individualized remedial prescriptions.

The program model was based on the premise that learning disabilities produce poor achievement; poor achievement creates strain; and the combination of LD, poor achievement and strain results in juvenile delinquency.

The program was initially three-dimensional in design. One dimension was to teach in a direct manner basic academics in the functional skill areas: language, reading, written language, and/or arithmetic using the juvenile's preferred modality. The second dimension was to stress continued learning gaining information in spite of low skill entry level. The third dimension was a focus on positive movement and modification in self-concepts. This latter dimension was deleted as it presented yet another variable to measure in an already complex research design.

Also, initially, there was a planned formative (on-going) evaluation to be conducted by NCSC. With a formative evaluation, program staff would have an objective, on-going, and up-to-date assessment of each student's individualized prescription to provide a basis for redesign when necessary. Unfortunately, the formative evaluation feed-back was not operational until a few months before the conclusion of the remediation program. All assessments and evaluations of this nature were made by the site Program Directors and Project Director on at least a quarterly basis.

The remediation model was a combination of two academic treatment programs: (1) ability (process) training, and (2) task analysis.[9] The attempt was made to use the segments of the two models which would be the most effective and omit the segments which would not appear to be useful for 12-16-year old adjudicated delinquents with LD. A battery (Table III) of tests identified each juvenile's impaired perceptual processes and defined the juvenile's preferred modality (visual, auditory, tactile or kinesthetic). The diagnostic evaluation also indicated each juvenile's basic level of achievement in reading and arithmetic, written language, and spelling.

A thorough study of each juvenile's file was made. This included an evaluation of the juvenile's academic status to assist in decision making. Informal reading, math, spelling, and interest inventories were administered. Generally, prescriptions were written after the informal testing. Lesson planning followed the completion of the prescription.

Remediation sessions followed after completion of lesson plans. The sessions had specific goals and time limits. These were formulated to facilitate success in learning. Each youth

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[9] Piazza, R. (Ed.). Three Models of LD. Guilford, Conn.: Special Learning Corp., 1979.

Ysseldyke, J. E., Salvia, J. Diagnostic-Prescriptive Teaching: Two Models. Exceptional Children, 1974, 41.

DIAGNOSTIC BATTERY USED
FOLLOWING SCREENING AND DECISION PROCESS

1. WISC-R
2. BENDER VISUAL MOTOR GESTALT TEST
3. WOODCOCK READING MASTERY TEST
4. ROSNER'S AUDITORY ANALYSIS
5. HIDDEN FIGURES TEST
6. KEY MATH DIAGNOSTIC ARITHMETIC TEST
7. CHILDREN'S EMBEDDED TEST (PART 2)
8. NUMBER COMPARISON TEST
9. HIDDEN PATTERNS
10. SWINTON-WEPMAN VISUAL ORIENTATION TEST
11. THURSTONE FLAGS

PROGRAM STAFF TESTING

1. WRITTEN LANGUAGE SAMPLE
2. MALCOMESIUS SPECIFIC LANGUAGE DISABILITY TEST
3. SLINGERLAND (IN SOME INSTANCES)
4. OTHER INFORMAL TESTS

TABLE III

had a separate folder which contained the individual short term objectives, lesson plans, materials and workbooks.

Lessons were outlined in detail using a task analysis approach where each learning step was presented singularly. Mastery of each task was demonstrated before the next step was introduced by the Specialist. Informal assessment techniques were used based on the R&D Prescription Code to determine the entry level of remediation. Teaching in these small components helped to build a better academic foundation.

Affective considerations were incorporated in order to facilitate intervention strategies. There were three primary factors involved. They were the student capability levels, remediation setting and positive and negative reinforcement.

Scheduling/Tracking and Managing Sample Population

All personnel kept a detailed daily log of activities and events.

GROUP 1 - LOCATORS

1. The locators recorded in a log book all attempts to contact a specific client.
2. After the client was located, a correct (current) address and phone number were recorded.
3. The school schedule and work schedule were recorded. If the school counselor's name and phone number were known, they were also noted.
4. The locator explained the Project, using a comprehensive script, to the client.
5. The locator scheduled an appointment with a member from Group 2.
6. All completed data were sent to Group 2.

GROUP 2 - TESTING DATA COLLECTORS AND REVIEWERS

1. Reviewed the file data and compiled any questions.
2. Determined any additional testing, such as Detroit, Malcomesius, Written Language Sample, other.
3. Administered and scored additional testing. Kept all testing protocols together in the file.

GROUP 3 - PRESCRIPTION WRITERS

1. Wrote prescriptions according to form provided, complete with sample and easy to follow instructions.
2. All prescriptions were written by the Learning Disability Specialists.
3. Sent completed file to Group 4.

GROUP 4 - SCHEDULERS AND COMMUNITY COORDINATORS

1. At this stage, remediation was initiated. The scheduler and community coordinator arranged a place for remediation to occur.
2. The clients were assigned to Specialists, mostly by geographic area.

ROLE OF PROGRAM DIRECTOR

Every procedure required close supervision. The Program Director's responsibilities were:

1. Oversee the effectiveness, ensure quality control and problem solve in all four aforementioned groups.
2. Document any difficulties and develop strategies to effectively remedy them.

There is a bibliography of the remediation program's reports attached to this Summary. The printed products of the remediation program include its resource materials catalog, curriculum guide and assessing written language sample procedures. To fully comprehend the program's methods and treatment strategies, it is important to study all the printed products in addition to this document.

B. PROGRAM DIRECTORS FINAL REPORTS - SUMMARIES AND EXCERPTS

BALTIMORE SITE
Program Director, Belton Wilder, Ph.D.

My major tasks consisted of hiring staff and making certain that they maintained control of the data collection process that was clearly outlined in the policy and procedures manual. I was also responsible for getting to know our caseload of students to make certain they were accounted for and that they were maintained in their respective groups (control and experimental).

There were goals and objectives written by me in the beginning of my tenure. Of course, they were consistent with the policy and procedures established by ACLD and ACLD Project Director during the formation of this national study. The goals consisted of:

1. Maintaining all students assigned to us by Educational Testing Service.
2. Engaging the remediation participants in consistent remediation.
3. Motivating all students to insure their constant participation.

4. Reporting all terminations to the project office.
5. Reporting all academic activities to the National Center for State Courts.
6. Working with the control trackers as they monitored the movement of the control group of students and as they questioned the LD Specialists regarding the remediation experimental group's participation.

There were also telephone calls with the Project Director on a weekly basis. These calls assisted with technical advice that was needed to insure an efficiently operated program. When there were decisions that needed immediate attention, the Project Director made herself available to assist me with making those decisions.

The ACLD-R&D was commissioned by NIJJDP to document the possibility of a relationship between learning disabilities and juvenile delinquency. We were hired by the ACLD-R&D to do the leg work in this study, collect and report data, track and control all clients for that purpose. We were responsible for involving these clients in a program of change. This program of change consisted of an academic treatment model.

Looking back at the study, and the personnel who worked hard and diligently to make the study a success, I can say truthfully that there was an impact by all of us. I sincerely feel that we touched the lives of these young people. We made promises to each one and we were able to follow through on most of the promises.

We became their friends as well as trusted confidants. We provided them with a service that made life an improvement for them. We could not change the total picture of their lives because of limited resources, but we were able to make a good impression . . . a gesture toward change in a very positive direction.

INDIANAPOLIS SITE
Program Director, Jamia Jacobsen, M.Ed.

The Staff: Teachers were recruited who met the qualifications and guidelines of the project, who had the personality and perseverance to travel in good and bad weather, and track youths in areas that were not considered the best. Whenever possible, each teacher hired was assigned to an area of the city in which the teacher lived. Emphasis was placed on selecting teachers from each geographical area of the city during the first or initial hiring.

The staff was informed on teaching procedures and utilized innovative and expert reinforcement techniques. An intensive

inservice program was presented and the teachers were exposed to a variety of materials. Materials were vital to each teacher. They desired to have input in the selection of the materials. This was a most positive aspect of this project.

Practicum students were also an active part of the program in the first year. All were in a Master's program within the Special Education field. Research Assistants (RA) were assigned to the project during the second grant period. The RA's were obtaining degrees in Education, Psychology, Criminal Justice Fields, or were retired teachers.

PHOENIX SITE
Program Director, Loretta Weingel-Fidel, M.Ed.

Programmatic Guidelines: The primary task during the first month of the project was the writing of programmatic guidelines. Included in this was the writing of:

1. remediation program objectives;
2. a framework categorizing the functional areas involved in a learning disability remediation program;
3. a discussion of the major modalities for learning necessary to achievement in the functional areas;
4. a classification of tasks both teacher and student;
5. suggested methodology and materials;
6. a compilation of task checklists for the functional areas;
7. a flow chart of individualized remedial procedure.

Other duties included interviewing job applicants for the positions of Learning Disability Specialists.

Telephon: One of the most time-consuming (December-March), as well as important activities was the telephon, whose purpose was to gain parental consent for both the adjudicated juvenile delinquent and public school population. Literally thousands of parents were telephoned and informed of the goals of the ACLD-R&D Project for the purposes of enlisting their child's participation. Volunteers to do the phoning were recruited from the (1) Courts, (2) Private Schools, (3) District Schools' LD Staff, (4) Arizona ACLD, (5) Junior League, (6) University School of Nursing, (7) State Center for Law in the Public Interest, (8) University Department of Special Education, (9) PTA, (10) Organization of Junior Women, (11) State Department of Rehabilitation and Vocation, as well as miscellaneous others. All of these volunteers were trained at intensive inservice sessions by both ACLD and National Center for State Courts.

Community Support and Participation: The planning stage of the project included numerous activities designed to create good public relations between the project and the community.

These activities established a network of support and public interest for the issues being raised by the ACLD-R&D Project. Because of the extensive groundwork done at this time, an excellent community relationship was developed and maintained throughout the project.

Inter and Intra Component Planning Sessions: The planning stage of the project was a time for idea exchanging, procedure and policy writing, format development and overall structuring of the foundation and workings of the ACLD-R&D Project. Throughout this phase, the interactions between ACLD, Educational Testing Service and National Center for State Courts were characterized by high productivity and excellent rapport.

SUMMARY OF PROBLEMS FROM THE NATIONAL PROJECT OFFICE

1. ADMINISTRATIVE

The primary administrative problem was mainly in the realm of logistics. They were staggering from the initiation of the project. Most activities appeared to be of equal importance and equally complex.

Gaining the cooperation of key agencies at each site consumed many hours of travel and meetings. In most cases, each participating school district's Board of Education was approached by representatives of both grants. Numerous meetings were conducted with key individuals from the courts, corrections, educational agencies and advisory groups. In one school district, the School Board requested (and we acquiesced) the Informed Consent letters to parents be written in both Spanish and English. This was done to be certain that all parents would understand the purpose of their son/daughter's participation. The problems and solutions of gaining Informed Consent were well documented in quarterly progress reports to NIJJDP.

The assignment of caseloads to LD Specialists by geographical area was the next major logistic. The sample population was particularly transient at the Phoenix site. Throughout the months of remediation, scheduling was an administrative headache. One practical aid was a Student Tracking Form devised for the LD Specialists to track their caseloads.

2. PROGRAM

a. A major program problem was one of circumstances beyond our control. The sample population, according to the project's design, was to be 12-16-year old juvenile delinquents. As it turned out, the average of the sample population was 15.2 years when they started in the program. By the fall of 1978, most of those participating were 16.2 - 18.0 years of age.

Problems Cited by Program Directors According to Program Component and Problem Category*

Program Component	Problem	Number	Percent
Student	Attendance/Absenteeism	27	5
	Delinquency	15	3
	Behavioral Control	7	1
	Educational Progress	1	a
	Attrition	30	6
	Total	80	16
Teacher	Student Rapport	11	2
	Relationship with Others	3	1
	Morale	11	2
	Performance	22	4
	Attrition	39	8
	Personal Matters	7	1
	Total	93	19
Instruction	Quality (Overall)	6	1
	Scheduling	73	14
	Process/Content	12	2
	Materials	4	1
	Total	95	19
Program	Access/Coordination	22	4
	Management	31	6
	Policies	25	5
	Physical Space	10	2
	Support Staff	10	2
	Public Relations	18	4
	Personal Development (Staff)	9	2
	Total	125	25
Setting	Environment	8	2
	Social/Political Mileau	1	a
	Funding	6	1
	Research/Evaluation Reactivity	83	17
	Total	98	21
Total		491	100

[a]Less than 1 percent.

*Based on a personal communication from the Evaluator.

TABLE IV

Ten Categories of Significant Events and Problems
Cited Most Frequently by Program Directors of the LD/JD Project*

Significant Events	Problems
Scheduling	Research/Evaluation Reactivity
Research/Evaluation Reactivity	Scheduling
Policies	Attrition (Teacher)
Access/Coordination	Management
Performance (Teacher)	Attrition (Student)
Public Relations	Attendance/Absenteeism
Educational Progress	Policies
Attrition (Teacher)	Performance (Teacher)
Delinquency	Access/Coordination
Behavior Control	Public Relations

*Based on a personal communication from the Evaluator.

TABLE V

Few of the juveniles had received special services for their LD. By and large, the LD adolescent who does not receive any assistance during the elementary school years, develops severe emotional problems. So, the staff were faced with writing an academic treatment program for a multi-handicapped population. The difficulty was developing resource materials that could be adapted to the varying deficits; but material whose content would be interesting to the older adolescent. The point is, an academic treatment model is difficult to implement and conduct with the older adolescent especially when one is restricted to presenting strictly academic intervention to a population that has experienced academic failure all their school years.

b. The second program problem was lack of feedback from the Formative Evalutor. The most constructive feedback would have been from the Monthly Activity Tally reports. Unfortunately, the data was not translated in any form from the researcher to the program staff.

Program modifications were made through the Program Director's assessments and evaluations of each site's on-going remediation program. Additional technical assistance was issued by the Project Office. This assistance was produced by the Project Director's surveying the Monthly Activity Tally reports, site evaluations and making recommendations from the information available. However, more formal information on the progress of the program from the evaluator would have been very beneficial.

C. CONCLUSIONS AND RECOMMENDATIONS

I. CONCLUSIONS

Historical Summary: The remediation program was implemented to test the value of diagnosing and treating LD as a tool to prevent delinquency and/or as a rehabilitative treatment program. The ultimate purpose of the project was to provide information to assist in the development of informed policy with respect to learning disabilities and juvenile delinquency. The purpose of the remediation program was to create a vehicle (a) to measure the impact of remediation on the educational performance of school related attitudes of LD juvenile delinquents; and (b) to assess the effects of remediation on subsequent delinquency. The program model was based on the hypothesis that LD plus school failure plus social stress equals juvenile delinquency. Therefore, the remediation program had three major objectives for its sample population: (1) increase academic achievement; (2) change school attitudes; and (3) reduce delinquent activity.

The results of the effects of the remediation program and research data have been thoroughly documented in a series of

reports by Broder and Dunivant. Two of the reports are: An Evaluation of the Effectiveness of the ACLD Remediation Program in Improving the Educational Achievement of Learning Disabled Juvenile Delinquents, National Center for State Courts, Williamsburg, Virginia, May 1981; and Preventing Delinquency Among Learning Disabled Juvenile Delinquents: Evaluation of the ACLD Remediation Program, National Center for State Courts, Williamsburg, Virginia, July 1981.

Some extremely important results of the remediation program and research data are now evident. First, the data indicate there is definitive evidence that LD youth engage in significantly more delinquent behavior than non-LD youth. Second, the school failure hypothesis was pretty much confirmed. Third, the remediation improved reading and arithmetic achievement test performance. The point of dramatic gains was where at least 55-65 hours of remediation had been received. Overall gains were found for written language expression skills. Remediation was most effective for younger delinquents with low performance ability and for older juveniles with high performance ability. The delinquents with high pre-test arithmetic achievement scores gained more than did those with low pre-test scores. Overall, the remediation program was more effective for the LD delinquents than the non-LD delinquents. Fourth, change in school attitude was minimal. Fifth, the remediation program participants evidenced in post-testing a significant decline in delinquent activity compared to the control group. There was a threshold effect when the juveniles received at least 35 hours of remediation. Finally, the program was conducted as designed.

The ACLD-R&D remediation program results indicate that certain academic intervention will rehabilitate LD delinquents. Additional results suggest that with early identification and the same type intervention future delinquency could be prevented among children with LD.

The conclusions are of significant import in relation to the continuing increase of juvenile crime; the incidence of LD in both officially non-delinquent and adjudicated delinquent populations; and the serious social and economic costs of crime which could be drastically reduced by appropriate remediation programs.

II. RECOMMENDATIONS

Remediation Program Recommendations:

Evaluate to determine specific learning disabilities and the adolescent's primary learning modality.

Develop individualized learning plans.

Develop a plan that focuses on the strengths of this modality, teach to the strength and not the weakness.

Develop a plan that allows for at least 50 hours of remediation work in a school year.

When possible, have remediation relate to school subjects and school activities.

Provide lots of structure. Design a highly structured environment for the youth.

Work in a neutral environment that is free of distractions.

Work in short 20-minute sessions rather than in longer blocks of time.

Design a variety of program modifications to the ACLD model such as social skills training, motivational development, vocational skills training and, where possible, work experience/on the job training.

Develop techniques to avoid teacher and student "burn-out."

Policy Recommendations

The establishment of adequate psychoeducational testing programs in the lower school grades in order to diagnose learning disabilities at the earliest possible age.

Provision of appropriate individualized programs in the school systems that will correct or minimize the problems of learning-disabled youngsters.

Demonstration, evaluation and refinement of the ACLD remediation model.

The development within court systems of clinical services which can detect learning-disabled children who have escaped earlier detection.

The development of inservice training programs for law enforcement, courts and institutional staff to detect learning disabilities and problems.

The development of uniform policy and programs between the educational and juvenile justice systems.

In sum, looking at our national school drop-out rate and recidivism rate in the juvenile justice system, we seem to be compounding failure rather than building on success. In short, the old attitudes, cliches, myths, and dogmas are not working.

Clearly, we need to take a new look at those factors that lead youth into trouble, failure, and an ever-increasing drain on their collective potential and on society's ability to foot the costs.

To effectively serve the LD youth, there must be a combined cooperative effort of staff and public officials who can create, implement, conduct, and fund an appropriate service delivery program for this high risk group of youth.

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Specialist LD Specialist

Date November 8, 1978

ACLD-R&D PROJECT PRESCRIPTION OUTLINE

Client Name Client A

Address

Phone Code 000 D.O.B.

P.O. Phone

School Grade 9

Remediation Site

SUMMARY OF DIAGNOSTIC FINDINGS:

Client is functioning within the bright average range of intelligence as indicated by the WISC-R. He performs better in non-verbal areas than verbal. He demonstrates a short attention span, especially towards auditory stimuli. Auditory memory and discrimination skills are inadequate and in need of remediation. Visual processes are well developed and function effectively. Client is functioning significantly below grade level in math. He demonstrates incomplete mastery of basic computational skills. His awareness of time is also deficient. Reading skills indicate incomplete mastery of phonics and word identification. Memory of material appears to be interfered with by client's auditory processing of the stimuli/symbols resulting in an incomplete memory for what is read.

LESSON PLAN FORM - 4-79

STUDENT CLIENT A — REMEDIATION — PROGRAM DIRECTOR COMMENTS

SPECIALIST JANE DOE

DATE APRIL-MAY

ACADEMIC AREAS	DEFICIT AREAS
READING	PASSAGE COMPREHENSION
MATH	TIME

OBJECTIVE	ACTIVITY	MATERIALS	RESULTS
INCREASE KNOWLEDGE OF THE CONTEXT CLUES FOR PASSAGE COMPREHENSION	TEACH INFERENCES FROM TITLES AND PICTURES	SCIENCE RESEARCH ASSOCIATES CAREER READING SERIES	4/22 INTERESTING DISCUSSION
	READ STORIES WITHOUT ENDINGS. HAVE STUDENT MAKE SOME UP	ANN ARBOR CRITICAL READING SERIES	4/26 ORAL WORK BETTER THAN WRITTEN
	USE NEWSPAPERS TO HELP DEVELOP UNDERSTANDING OF DIFFERENT INTERPRETATIONS	SCHOLASTIC CONTACT	4/28 BEGINNING TO THINK MORE CRITICALLY
TO DEVELOP A BETTER UNDERSTANDING OF THE CALENDAR	USE MATH PROBLEMS BASED ON ACTUAL CALENDAR - DEC. - MAY	ALLYN & BACON SUCCESS WITH MATH	4/25 CONFUSED ABOUT COMPUTING DAYS OF THE MONTH, HOURS IN THE DAY, MINUTES IN THE HOUR 4/28 BETTER UNDERSTANDING

25

27

28

PRESCRIPTION
PAGE SIX

REMEDIATION RECOMMENDATIONS
11/8/78

PROBLEM AREA	OBJECTIVES	METHOD	MATERIAL	TIMELINE
READING: COMPREHENSION				
21.01 SEQUENCE	LEARN TO IDENTIFY SEQUENTIAL ORDER	TASK ANALYSIS	BOOK LAB, INC. HIP READER; ALLYN & BACON BREAKTHROUGH READING SERIES	3 MONTHS
21.11 CRITICAL JUDGMENTS	LEARN TO EVALUATE AND IDENTIFY THE AUTHOR'S PURPOSE, VIEWPOINT AND COMPETENCY		BOOK LAB, INC. HIP READER BLACK HISTORY SERIES; ANN ARBOR PUBLISHERS CRITICAL READING SERIES	3 MONTHS
WORD ATTACK SKILLS				
22.03 PHONETIC ANALYSIS	LEARN TO ANALYZE WORDS TO ENABLE STUDENT TO IDENTIFY THE PHONETIC COMPONENTS		DLM SOUND FOUNDATIONS PROGRAM I; WILLIAM MORROW CO. WRITING ROAD TO READING	3 MONTHS
SPELLING	USE PHONOGRAMS; REVIEW AND DEVELOP KNOWLEDGE OF SPELLING RULES; TIE IN WITH WORK ON VOCABULARY DEVELOPMENT		SPALDING SPELLBOUND WORD STUDY I & II	3 MONTHS

26

PRESCRIPTION
PAGE SIX (CONT.)

PROBLEM AREA	OBJECTIVES	METHOD	MATERIAL	TIMELINE
AUDITORY PROCESSING	WRITE WORDS AND SENTENCES FROM DICTATION; ENGAGE IN CONVERSATION; ORAL READING - ASKING QUESTIONS AT END OF MATERIAL		SPALDING SPELLBOUND WORD STUDY I & II	3 MONTHS
MATH				
FRACTIONS	REVIEW ADDITION, SUBTRACTION, MULTIPLICATION AND DIVISION OPERATIONS FOR FRACTIONS; DRILL AND PRACTICE ALL AREAS; PROCEED TO DECIMALS/PERCENTS; USE WORD PROBLEMS TO HELP APPLY SKILLS		SPECTRUM SRA COMPUTATIONAL SKILLS ADVENTURES WITH ARITHMETIC A) FRACTIONS B) DECIMALS C) PERCENTS	3 MONTHS
TIME	REVIEW CONCEPTS OF TIME RELATIVE TO EVERYDAY SITUATIONS		SPECTRUM	3 MONTHS

27

(VISUAL LEARNER)

MONTHLY ACTIVITY TALLY (MAT)

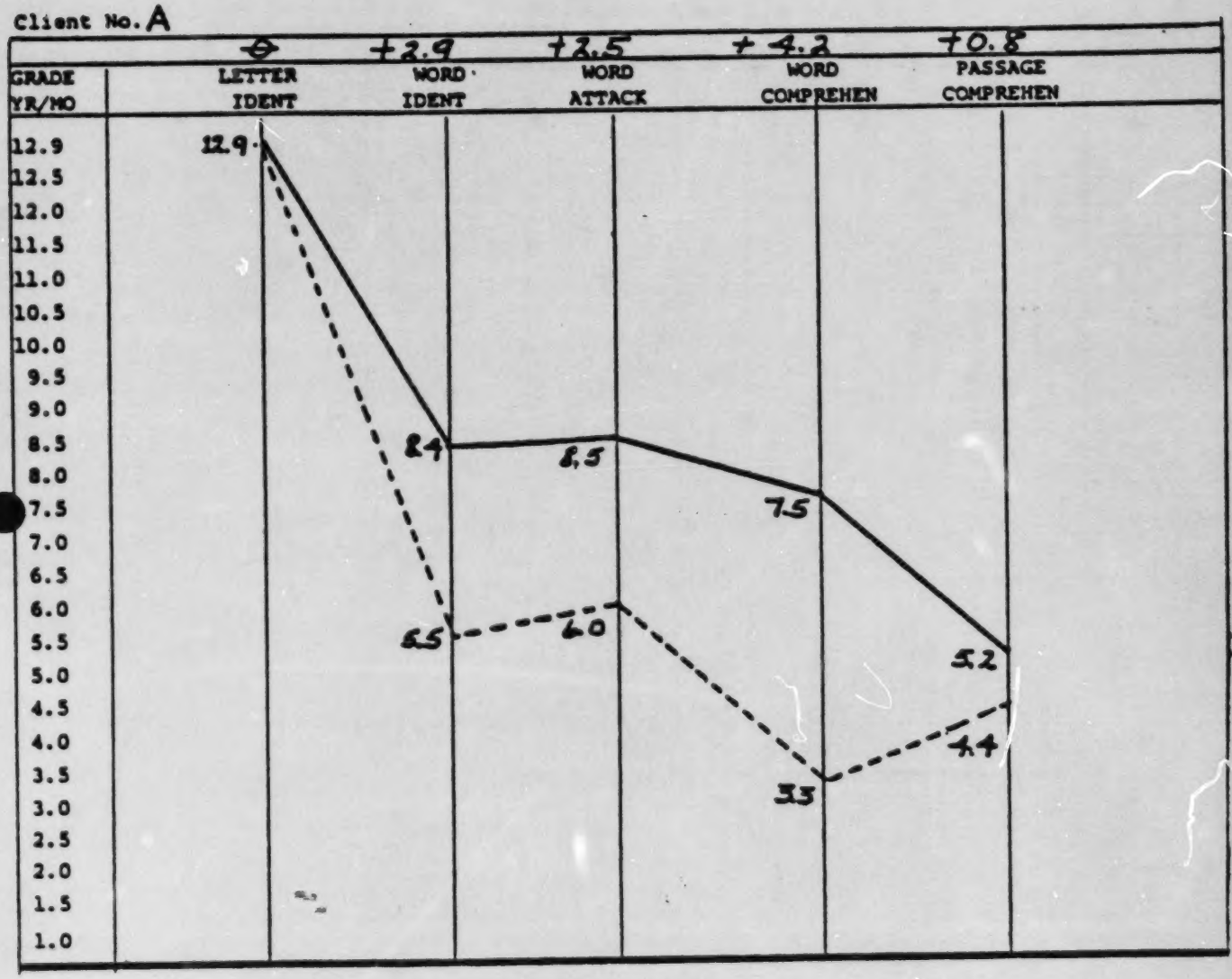
REPORTING PERIOD 4-23-79 TO 5-18-79

NAME OF STUDENT: CLIENT A NAME(S) OF TEACHER(S): _____

PLACE OF REMEDIATION: _____ _____

DATE	ACTIVITY	PRESCRIPTION	MATERIAL	DURATION	RATING (0,+,++)
4-23	TEACH INFERENCES	21.04	SRA CAREER READING	20	++
	READ STORIES WITHOUT ENDINGS	21.08	ANN ARBOR CRITICAL READING	15	++
	USING CALENDAR FOR MAY WORK ON MATH PROBLEMS BASED ON CALENDAR	51.15G	ALLYN & BACON SUCCESS W/ MATH	10	0
4-26	USE NEWSPAPERS TO CONTRAST DIFFERENT INTERPRETATIONS	21.09	NEWSPAPERS	15	++
	REPEAT CALENDAR WORK	51.15G	SUCCESS WITH MATH	16	+
	BASIC MATH COMPUTATION	51.01, 02, 03, 04	FLASH CARDS	14	+
4-28	WORK ON INFERENCES	21.04	CAREER READING	25	+
	REVIEW COMPUTATIONS SKILLS (MULT.)	51.03	SUCCESS WITH MATH	20	+
4-30	USE SPORTS PAGES OF NEWSPAPER TO DISTINGUISH FACT AND OPINION	21.05	NEWSPAPERS	10	+
	USE LIST OF CRITERIA FOR JUDGING READING STORY	21.11	BOOK LAB HIP READER P. 31-36	25	++
	REVIEW MULTIPLICATION SKILLS	51.03	MERRILL SKILLTAPES	10	+
5-3	DENTIST APPOINTMENT - MISSED				
5-5	PRESENT PICTURES FROM FOLDER FOR INTERPRETATION	21.07	TEACHER MADE	15	++

Client No. A



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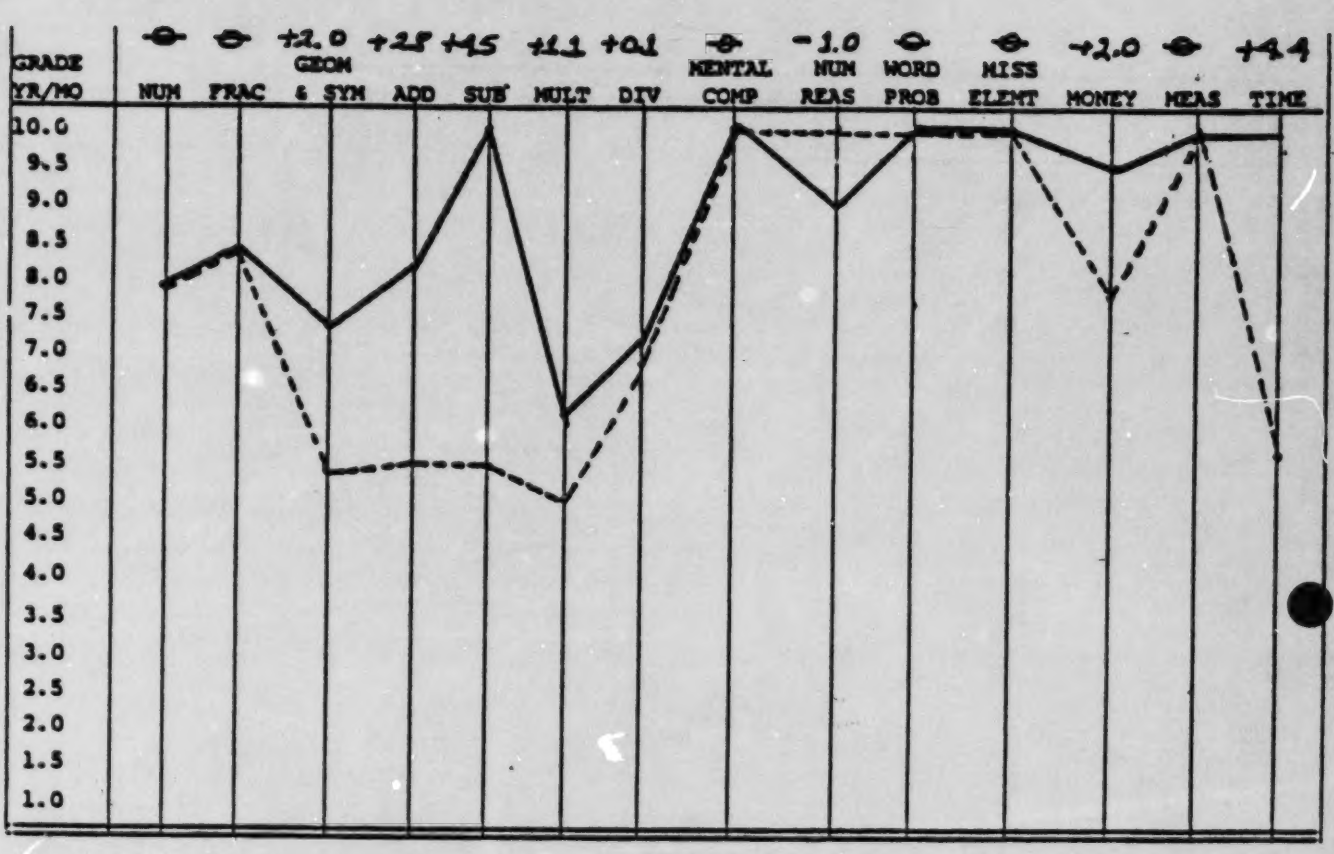

LEGEND= ---------PRE-TEST RESULTS PER CLIENT EXHIBITED.
_____POST-TEST RESULTS PER CLIENT EXHIBITED.
RAW SCORES ARE CONVERTED TO GRADE EQUIVALENCY.

RECAP: MINUTES IN REMEDIATION
1351 READING
960 MATH
1549 OTHER BASIC SKILLS

Total Time 62 Hours
(3,840 Minutes)

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one day their was this guy named Paul and he was high. Well any ways he started spaced out and he thought he saw his uncle (he was seeing things) actually it was some little friend grader and her walk well any ways he came clown and laughed his ass off.

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Well, ONE Day Lisa was scopen out The scene with guys and she really Dug on this dude named George. Now George was a stuck up Jack and Really a tightwad with Chicks. So Lisa was stuck with having to ask George to go to the prom ball. She was Really Nervous! So she asked him in Class. And he acted all Nice. And held her hand and said yes. That Night she was with her mom getting ready waiting till 9 o'clock for George. He never came. Turns out he went with Sally.

POOR LISA.

# 4	93
# 5	10
4/5	9.3

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CASE STUDY ANALYSIS: CLIENT A

Client A is a 14-year 11-month old learning disabled youth who is on parole living in a half-way house. His first contact with the courts was at the age of 12 years 2 months because of possession of a dangerous substance. At that time, he was placed on probation, lived at home and attended a public school. Subsequent to his adjudication as a delinquent, he was apprehended two more times for possession of drugs and finally he was sent to a correctional training school because of drugs and grand theft auto. He had been on parole at the half-way house for approximately 3 months when he came into the R&D Project.

His parents were married and living together. He was the 3rd child of four. His parents reported (as did he) that none of the other children had been in trouble nor had any school related problems. Client A reportedly had had experience with school failure since the third grade. He had not been identified as LD prior to his involvement in the Project.

This client was in the remediation program from September 14, 1978, until June 10, 1979. He was at the half-way house the entire time. He was twice a runaway but called the LD Specialist to meet. His formal remediation sessions did not commence until November 8, 1978, following completion of informal testing, staffing and written individualized educational plan. He received remediation for 7 months, with a total of 62 hours' remediation.

Client A is functioning with the bright average range of intelligence as indicated by the WISC-R. He performs better in non-verbal areas than verbal. He demonstrates a short attention span, especially towards auditory stimuli. Auditory memory and auditory discrimination skills are inadequate and in need of remediation. Visual processes are well-developed and function effectively.

The client is functioning significantly below grade level in math. He demonstrates incomplete mastery of basic computational skills, as well as decimals and fractions. His awareness of time is also deficient. Reading skills indicate incomplete mastery of phonics and word identification. Memory of material appears to be interfered with by Client's auditory processing of the stimuli/symbols resulting in an incomplete memory for what is read.

DIAGNOSTIC TEACHING STRATEGIES

Sequencing Instruction

Making teaching decisions based on each juvenile's mastery of specific objectives.

Attention

The attention of some juveniles wander from time to time. Some may be prompted to day-dream more than usual because they do not understand the topic or the directions for the learning activity. In these instances, revise instructions into simpler language.

The way in which instructional materials are used may also produce unnecessary distractions for some. When this is the case, try using a page marker or a mask to hide all but the areas the juvenile is actually working on.

Perhaps the most frequent problem related to attention span is the actual length of time a juvenile is capable of giving to a particular learning task. Sometimes merely reorganizing the time devoted to various lesson activities will give a better learning experience. A 20-minute lesson might be divided like this:

5 minutes - Develop a new concept or skill
2-3 minutes - Discuss and give directions
7 minutes - Drill or other reinforcement
5 minutes - Game or activity related to lesson

Organize lessons into mini-blocks so the student can give more of himself to the lesson. Adapt an approach that is comfortable for you and that the student responds to best.

Concept Development

Concept development is important in each academic basic skill area of the student's experience. You must decide whether the juvenile understands the concept. One concept development sequence that has been especially successful with students who have difficulty understanding is to present the idea in three stages: The manipulative stage, the pictorial stage, and the symbolic stage. Special emphasis on the initial manipulative stage helps students make the mental leap to the pictorial and symbolic (look-see-say) stage.

After teaching a lesson, measure the juvenile's deficiencies, state achievement expectations for that lesson, and explain them to the juvenile. In this way, the juvenile can remove the deficiency and bring him or her to the level of expected performance.

Memory

Remembering is related to an adolescent's ability to pay attention and understand concepts and to his or her learning rate. Being able to retrieve basic facts quickly from memory is important to success in most topics. Many students' handicaps affect the speed with which they think or their ability to abstract must over learn basic facts and other memory-related information.

Learning Rate

Learning rates vary from student to student. What you can do is: (1) keep him or her in mind when you prepare a lesson, (2) diagnose deficiencies and state expectations clearly.

Delayed Language

Juveniles whose language development has been delayed for one reason or another will need more DO-SEE activities.

Fine Motor Problems

Juveniles with fine motor problems will have difficulty with manipulatives and writing activities. A peer tutor or "buddy" can be especially helpful in these kinds of activities.

TEACHING HOW TO LEARN TIPS

Dictionary-Pictionary

Help the adolescent make his or her own collection of examples of vocabulary or picture models of concepts. This will give the child easy access to a reference model and make it possible to complete a task even if he or she cannot remember how to begin.

Visual Prompts

Visuals such as charts, checkpoints of steps in a procedure, the use of color, etc., can help students learn.

Overlearning

Check after instruction for retention of concepts, facts, and procedures.

Competition

Avoid competition in timed activities. Instead use timed activities so that the juvenile races against his or her own best time.

Practical Application

Making practical applications of concepts makes learning easier. Use the classroom store or newspaper, sports statistics, etc.

Strengths and Interests

Focus on juvenile's strengths and interests. Begin a lesson with a topic of juvenile's interest or with a previously demonstrated strength to help develop self-concept and to motivate him or her.

Encouragement

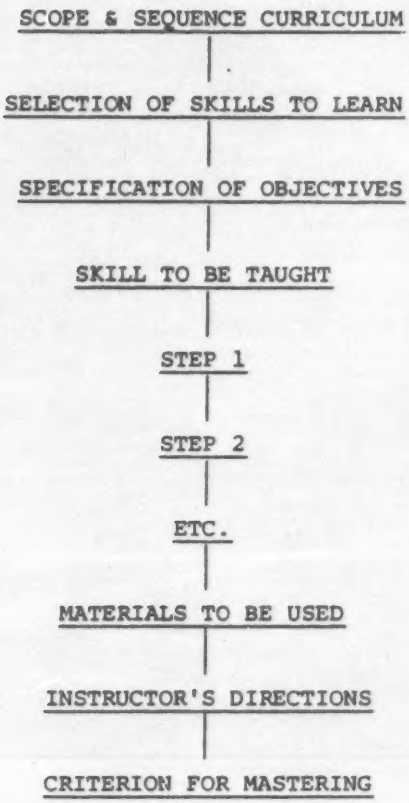
Use praise and encouragement to reward positive growth. When correcting written and oral responses, indicate correct and acceptable work before revealing a strategy to deal with errors.

Diagnostic Interview

A diagnostic interview can help pinpoint the source of a juvenile's frustration, lack of understanding, or interest and put you in a better position to clarify, remediate, and provide instruction.

TASK ANALYSIS INSTRUCTIONAL METHOD

FLOW CHART



IN ORDER TO ASSESS PERFORMANCE AND COMPETENCIES OF BASIC ACADEMIC SKILLS, WE DEFINED EACH AREA AND DEVELOPED A PERFORMANCE CHECK-LIST AS A GUIDELINE FOR MAKING JUDGMENTAL DECISIONS FOLLOWING INFORMAL TESTING AND OBSERVATIONS.

TASK ANALYSIS METHOD OF INSTRUCTION.

Task analysis is a method which breaks down into the smallest possible steps, a particular task we want a student to learn or master.

For example, to master dictionary skills, the tasks are:

1. Competency in alphabetizing.

2. Learn usage of guide words.

3. Definitions

   a. Single word meanings.
   b. Multiple word meanings.

4. Pronounciation mastery.

5. Special usage skills

   a. Abbreviations.
   b. Plurals.
   c. Homonyms, etc.